USSN: 10/025,742
Art Unit: 2133
Response to Final action mailed 03/24/2005

Amendments to Claims

This listing of the claims will replace all prior versions, and listing, of claims in the application:

1(previously presented).   A method of identifying a failure location in a datapath in a set of datapaths, said datapath traversing from an ingress point through at least a first component to an egress point, said method comprising:

inserting a diagnostic cell into an active data traffic stream passing through said datapath at a starting point upstream of said first component in said datapath;

providing at least a first diagnostic cell counter module associated with a first location in said first component, said first diagnostic cell counter module recognizing when said diagnostic cell passes said first location and tracking passage of said diagnostic cell past said first location; and

analyzing said diagnostic cell counter module to identify said failure location in said datapath.

2(previously presented). The method of identifying a failure location in said datapath as claimed in claim 1, wherein

said ingress point and said egress point reside on a same component in said communication element;

said set of datapaths is routed from said ingress point to said egress point via a hardware loop-back; and

said diagnostic cell counter module tracks passage of said diagnostic cell past said first location using a counter.

3 (previously presented). The method of identifying a failure location in said datapath in a set of datapaths as claimed in claim 2 wherein said failure location is identified as being downstream of said first location when said diagnostic cell counter module recognized that said diagnostic cell passed said first location.

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4(previously presented). The method of identifying a failure location in said datapath as claimed in claim 3 wherein a second diagnostic cell counter module is provided at a second location in said datapath, said second diagnostic cell counter module recognizing when said diagnostic cell passes said second location and tracking passage of said diagnostic cell past said second location.

5 (previously presented). The method of identifying a failure location in said datapath as claimed in claim 4 wherein said failure location is identified as being downstream of said second location when said second diagnostic cell counter recognized that said diagnostic cell passed said second location.

6 (canceled).

7. (previously presented). A system for identifying a failure location in a datapath in a set of datapaths in a communication element, said datapath traversing from an ingress point through at least a first component to an egress point, said system comprising:

at least a first diagnostic cell counter module adapted to be associated with a first location in said first component, said first diagnostic cell counter module recognizing when a diagnostic cell inserted into a data traffic stream passing through said datapath passes said first location and tracking passage of said diagnostic cell past said first location;

an analysis module adapted to analyze said diagnostic cell counter module to identify said failure location in said any datapath.

8(previously presented). The system for identifying a failure location in said datapath in a set of datapaths as claimed in claim 7 wherein

said ingress point and said egress point reside on a same component in said communication element;

said set of datapaths is routed from said ingress point to said egress point via a hardware loop-back; and

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said diagnostic cell counter module tracks passage of said diagnostic cell past said first location using a counter.

9(previously presented). The system for identifying a failure location in said datapath as claimed in claim 8 wherein said analysis module identifies said failure location as being downstream of said first location when said diagnostic cell counter module recognized that said diagnostic cell passed said first location.

10(previously presented). The system for identifying a failure location in any datapath as claimed in claim 9 wherein a second diagnostic cell counter module is provided at a second location in said any datapath, said second diagnostic cell counter module recognizing when said diagnostic cell passes said second location and tracking passage of said diagnostic cell past said second location.

11(previously presented). The system for identifying a failure location in said datapath as claimed in claim 10 wherein

said analysis module is adapted to identify said failure location as being downstream of said second location when said second diagnostic cell counter recognized that said diagnostic cell passed said second location.

12.(canceled)

13. (previously presented) The method of identifying a failure location in said datapath as claimed in claim 5, wherein said diagnostic cell is extracted from said datastream at an extraction location downstream from said second location if said diagnostic cell is received at said extraction location.

14(currently amended). The method of identifying a failure location in said datapath as claimed in claim 13, wherein if a preset time has elapsed prior to extraction of said diagnostic cell from said extraction location, then an error condition is noted.

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15. (previously presented)   A method of identifying a failure location in a datapath in a set of datapaths, said datapath traversing from an ingress point through at least a first component to an egress point, said method comprising:

inserting a diagnostic cell into said datapath at a starting point upstream of said first component in said datapath;

providing at least a first diagnostic cell counter module associated with a first location in said first component, said first diagnostic cell counter module recognizing when said diagnostic cell passes said first location and tracking passage of said diagnostic cell past said first location; and

analyzing said diagnostic cell counter module to identify said failure location in said datapath,

wherein

data traffic traverses said ingress point to said egress point through another datapath in said set of data paths.

16. (previously presented) The method of identifying a failure location in a datapath in a set of datapaths as claimed in claim 15, wherein

said ingress point and said egress point reside on a same component in said communication element;

said set of datapaths is routed from said ingress point to said egress point via a hardware loop-back; and

said diagnostic cell counter module tracks passage of said diagnostic cell past said first location using a counter.

17 (previously presented). The method of identifying a failure location in said datapath in a set of datapaths as claimed in claim 16 wherein said failure location is identified as being downstream of said first location when said diagnostic cell counter module recognized that said diagnostic cell passed said first location.

18(previously presented). The method of identifying a failure location in said datapath as claimed in claim 17 wherein a second diagnostic cell counter module is provided at a second

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location in said datapath, said second diagnostic cell counter module recognizing when said diagnostic cell passes said second location and tracking passage of said diagnostic cell past said second location.

19(previously presented). The method of identifying a failure location in said datapath as claimed in claim 18 wherein said failure location is identified as being downstream of said second location when said second diagnostic cell counter recognized that said diagnostic cell passed said second location.

20 (previously presented) The method of identifying a failure location in said datapath as claimed in claim 19 wherein said any one of said any datapath is a VPI/VCI connection.

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